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| **Weekly Lesson Plans** | | | | | |
|  | **Monday, October 11** | **Tuesday, October 12** | **Wednesday, October 13** | **Thursday, October 14** | **Friday, October 15** |
| **GLETS** | **STANDARD:**  1.1.b Recognize and use equivalent representations of real numbers in a variety of forms including scientific notation, radicals and other irrational numbers such as pi  **GLET:**   * Applies area formulas to solve for a given variable (for example, solve for r in C=2πr * Recognize that pi is an irrational number and can be represented equivalently as the ratio of circumference of a circle to its diameter. | **STANDARD:**  2.3.c Solve equations with more than one variable for a given variable (for example, solve for p in I=prt or for r in C=2πr  **GLET:**   * Applies area formulas to solve for a given variable (for example, solve for r in C=2πr | **STANDARD:**  4.2.b Use properties of polygons to find areas of regular and irregular figures  1.1.b Recognize and use equivalent representations of real numbers in a variety of forms including scientific notation, radicals and other irrational numbers such as pi  **GLET:**   * Discover area formula of a circle and apply to problem solving situations * Recognize and use equivalent representations of real numbers such as: | **STANDARD:**  1.3.a Use number sense to estimate and justify the reasonableness of solutions to problems involving real numbers  **GLET:**  Understand the difference in working with pi as π as compared to 3.14 in calculations and the effect on the final answer. | **STANDARD:**  1.3.a Use number sense to estimate and justify the reasonableness of solutions to problems involving real numbers  **GLET:**  Be able to estimate an answer of a problem involving circles by rounding pi to 3 to justify the reasonableness of a solution. |
| **Content Objective** | I will discover the number pi by calculating the ratio of the circumference to the diameter. | I will solve for the circumference of a circle by solving for C in pi=C/d and substituting given values. | I will solve for the area of a circle by substituting the radius into the area formula. | I will discover the difference between using pi and 3.14 by calculating with both and comparing and contrasting the results. | I will analyze word problems and apply the correct property by identifying important information and unknowns, setting up and equation, then solving. |
| **Assessment** | Pi exit ticket | Students will demonstrate their understanding on the final check. | Students will show proficiency and ability to proceed to you do by successfully substituting and solving for the area. | Students will show understanding if they can write 3 pros and cons of using approximations. | Student will perform by successfully, independently completing the table (problem solving) and arriving at a sufficient answer to the word problem. |
| **Summary of Content Addressed** | Students will gain a conceptual understanding of the number pi and how it applies to circles. | Students will conceptually understand the circumference of a circle and how to use the diameter or radius to solve. | Students conceptually understand the area of a circle and how to use the diameter or radius to solve. | Students will use mathematical reasoning and number sense to distinguish the difference in estimating pi (3.14) and using the exact number. | Students will take their understanding of circles, circumference, area, and pi and apply it to real world situations. This means they will practice identifying important information within the problem, understand what the problem is asking, and determine which formula to use. |
| **Key Vocabulary and Lit Terms** | Circle  Center  Circumference  Diameter  Pi  Ratio  Constant | Circle  Circumference  Diameter  Ratio | Area | Approximation |  |
| **Warm-Up** | Students will define  Circle  Diameter  Pi  (pre-assess) | Students will define  Circumference  Diameter  Pi  (recall from yesterday) | Students will solve for   1. c= if d=5 2. d= if c=10 3. r= if c=18 | Students will solve for   1. a= if r=12 2. a= if d=20   using 3.14 for pi | Take out your agenda, look on page 27 and write down the take five problems solving process |
| **“I Do”** | I will define key terms at the beginning of the lesson. Then I will clearly state directions and model the twizzler activity. After the twizzler activity I will model approximating pi by taking the ratio of the circumference to the diameter and filling in the table. Finally I will lead discussion in determining what type of number pi is. | I will review definitions to key terms. I will then model how to solve a formula for a specific variable (solve for C). Later I will model the process of substituting given information into the, newly discovered, circumference formula. Finally, I will model the situation in which I need to modify the formula to solve for diameter or radius. | I will introduce area and the relationship between the radius and the area of a circle, explaining in detail on the board (or with a more detailed picture like the one on their paper). Model how to substitute radius or diameter to solve for area. Model how to subtract areas to achieve the requested area in more intricate pictures. | I will facilitate activity in which students complete computations and explore relationships between approximating and using exact value of pi (model completing one column of the table). | I will model the ‘take five’ method of problem solving. (1. Read the problem 3 times 2. Think about the question 3. Choose a strategy 4. Does the answer make sense 5. Communicate results) by thinking aloud and filling in the table as I go. I will specifically do this for the I DO problems and slightly abbreviate yet still think aloud and complete together the WE DO problems. |
| **“We Do”** | The students will (with teacher support) complete the twizzler activity. Then they will complete the table. Finally, they will participate in discussion and investigation of determining what type of number pi is. | The students will independently solve for the requested variable by substituting given information. Then they will check their method and solution as we complete the problem as a class. | Students will solve for area of given shapes by substituting the given information into the equation. Students will also decide if areas will need to be subtracted. Teacher will go over. | Students will complete the table and answer probing questions with teacher support and collaboration. | Students will follow the lead of the teacher by thinking through the ‘take 5’ problem solving process and using it to complete the table for the WE DO word problems. |
| **“You Do”** |  | Students will independently complete the circumference practice worksheet. | Last two problems applying area and problem solving. |  | Students will independently complete the circle word practice worksheet. |
| **Resources** | Pi word doc  Pi exit ticket | Circumference doc  Circumference Practice | Area doc | Approximation doc | Circle word doc  Circle word practice |